

CHAPTER

3

ENVIRONMENT

PART I : IZHORIANS

1 READING

When people discuss the environment or climate in the context of indigenous populations, we often mean how the landscape or weather affects their way of life. Take the Nenets for example. Nenets reindeer herders are famous throughout Russia. If you type “Nenets” into a search engine and go to images, you’ll see photos of frozen Arctic tundra, reindeer racing, reindeer migration, portable housing called *chum*, and many other things unique to the Nenet culture. Another example are the Nivkh people of Sakhalin island, who are famous for being skilled salmon fishers and even move their settlements in order to catch salmon during the wintertime. Still, when we speak of the Izhorians, we have another definition of environment in mind.

In the English language, *environment* can refer to the natural world, the **ecosystem** of a particular area, but also the conditions under which people live. This definition is perhaps **better suited** to open a discussion on the Izhorians. To know the environment of the Izhorians is to know the shifting ownership of Ingria, which is an area of Russia near Finland. Izhorians broke from Karelian tribes in the tenth century. For centuries, Ingria experienced fighting between Sweden and Novgorod, and they were taxed heavily and often forced to fight by Novgorod. In addition, after the fight, Karelian tribal areas belonged to Sweden, whereas Izhorians remained under Novgorod’s rule. Then, in the late 15th century, the Novgorod Republic was conquered by Moscow. Many Izhorians were deported or forced to assimilate.

The next big environmental change happened in 1703 when Saint Petersburg was established. Many Izhorians found new occupations as traders. When **serfdom** was abolished in 1861, Russian language and culture spread to remote Izhorian villages, and Russian and Izhorian cultures co-existed. This persisted until Izhorian schools were closed by Soviet authorities in 1937. World War Two brought with it many casualties. The tragic Siege of Leningrad, in which many Izhorians **valiantly** fought, occurred on Izhorian territory, as did many other battles. In 1902, there were 26,000 Izhorians living in the Soviet Union, but now fewer than 300 remain in Russia, and the majority of them live between the Neva and Narva rivers. Finally, don’t think that the natural world has not been important to the Izhorians. For both men and women, fishing is a time-honored tradition to which many Izhorian songs and poems have been composed.



ANSWER THE FOLLOWING QUESTIONS:

- In your opinion, what was the most significant historical event that has affected the Izhorians’ environment?
- How did the Izhorian community try to endure the negative impacts on their community?
- Is there still a city called Leningrad?
- What happened during the Siege of Leningrad?
- In your opinion, what will happen to the Izhorian language and culture?
- Should it be the role of a government to protect endangered languages and cultures?

THE LAKOTA

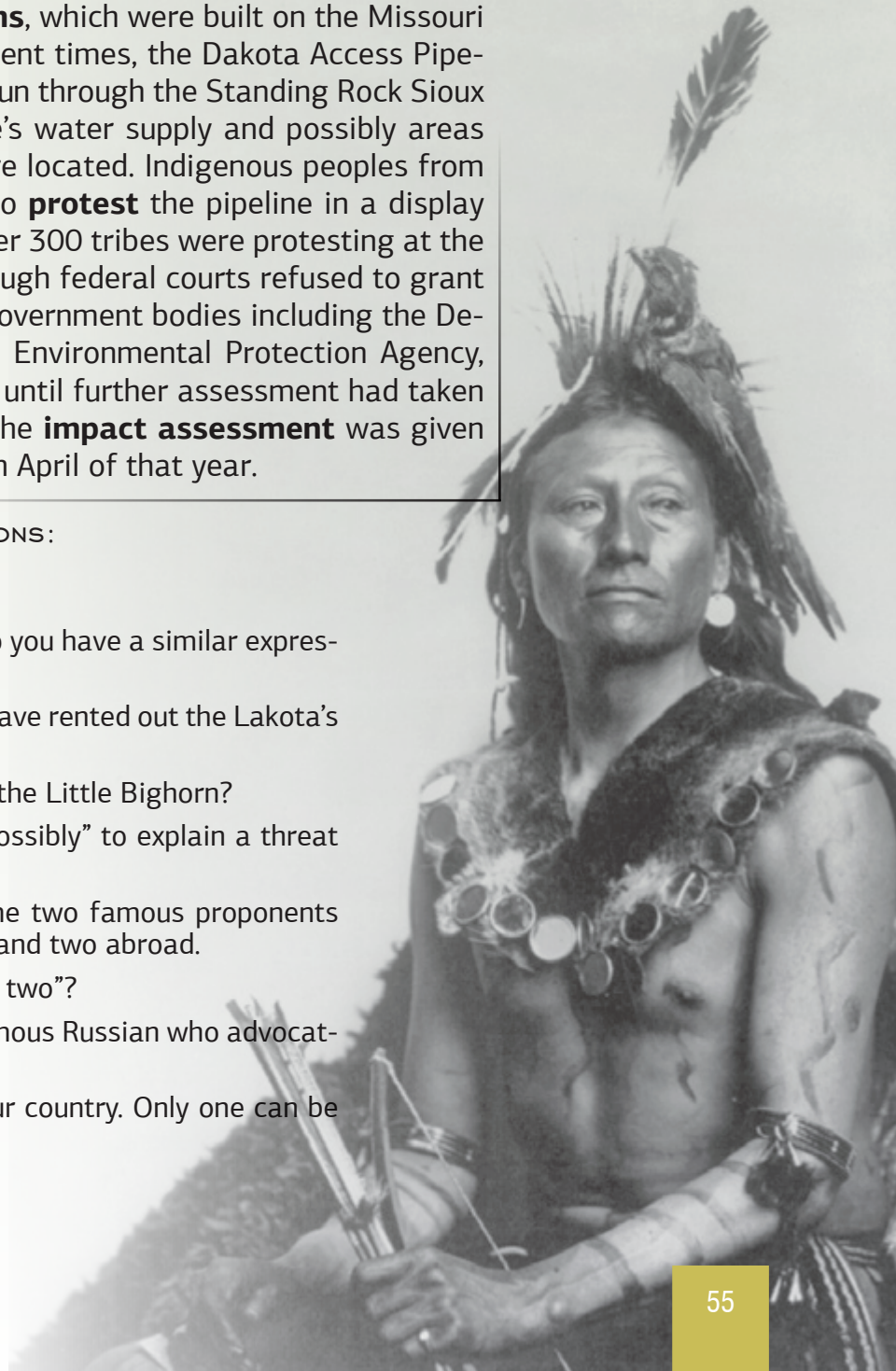
2 READING

The Lakota are a Native American tribe and a part of the Great Sioux Nation. Much of their history has been **colored by** environment-related events. In the late 19th century, General George Armstrong Custer discovered gold in the reservation's Black Hills. Breaking a treaty between the U.S. government and the Sioux, gold seekers rushed into Lakota land. The U.S. government bullishly tried to rent land in the Black Hills, which are **sacred** to the Lakota. When Lakota leader Sitting Bull refused, battle broke out, including the famous Battle of the Little Bighorn. In 1877, the Black Hills were taken from the Sioux Nation.

In the 1960s, many Lakota were once again forced to **react to** a change in their environment. This time it was not gold. Man-made reservoirs from several large **dams**, which were built on the Missouri river, flooded Lakota lands. In recent times, the Dakota Access Pipeline, an oil pipeline which was to run through the Standing Rock Sioux Reservation, threatened the tribe's water supply and possibly areas where Native American graves are located. Indigenous peoples from across North America gathered to **protest** the pipeline in a display of **civil disobedience**. In fact, over 300 tribes were protesting at the camp before the year's end. Although federal courts refused to grant the tribes an injunction, several government bodies including the Department of the Interior and the Environmental Protection Agency, to name two, halted construction until further assessment had taken place. In 2017, an order to stop the **impact assessment** was given and the pipeline was completed in April of that year.

ANSWER THE FOLLOWING QUESTIONS:

- Are the Sioux a tribe?
- How can history be "colored"? Do you have a similar expression in your first language?
- Do you think Sitting Bull should have rented out the Lakota's sacred land for gold rushers?
- What happened at the Battle of the Little Bighorn?
- Why does the author say "and possibly" to explain a threat to Native American graves?
- What is civil disobedience? Name two famous proponents of civil disobedience in America and two abroad.
- What is the purpose of "to name two"?
- Can you give an example of a famous Russian who advocated civil disobedience?
- Name three sacred places in your country. Only one can be a building.



THE FUTURE PERFECT

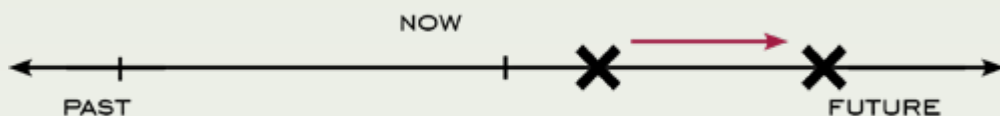
3 GRAMMAR

The future perfect talks about activities we expect to happen before some particular time in the future.

WILL + HAVE + PAST PARTICIPLE

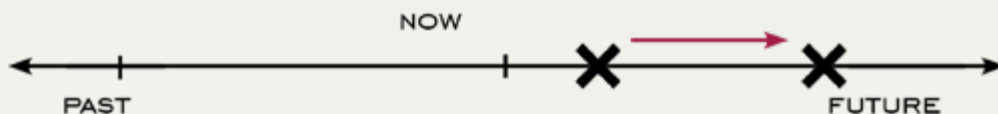
EXAMPLE:

Do you think you'll have completed the project by next month?



EXAMPLE:

By the time I leave Russia, I will have completed this textbook.



FILL IN THE CORRECT FORM OF THE VERB IN THE FUTURE PERFECT. DO YOU AGREE OR DISAGREE WITH THESE STATEMENTS?

- By the year 2030, many species _____ (perish) if we don't stop rainforest deforestation.
- By the year 2025, many of the Arctic glaciers _____ (melt).
- By the end of the century, global temperatures _____ (rise) more than five degrees.

II. WHAT WILL YOU HAVE DONE BY THE TIME YOU GRADUATE COLLEGE/BY THE TIME YOU RETIRE?

List three things you will have done by the time you graduate and three things you will have done by the time you retire.

4 LISTENING

Listen to the dialogue between Anastasia and Vladimir. Identify any instances of the future perfect. Explain why it is being used.



THE NAVAJO

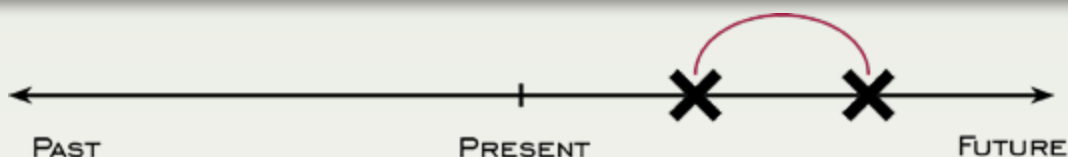
5 LISTENING

The Navajo are a Native American tribe numbering over 300,000. Members live predominately in the Southwest United States. The Navajo Nation occupies the largest reservation in all the United States.

LISTEN TO THE PASSAGE AND ANSWER THE FOLLOWING QUESTIONS:

- What will James and Fredrick do next Monday?
- Who will James be meeting at the entrance to the reservation?
- What is Fredrick's favorite Navajo cultural event?
- What mistake do both James and Fredrick make?

The future continuous is used to speak about an unfinished event or action that will develop at a later time.



PREDICTIONS:

- I heard that the Navajo Water Project **will be bringing** clean water to the town of Baca, New Mexico.
- **You'll be longing** for your time on the Navajo Nation lands once you get back to Phoenix.

EVENTS WE EXPECT TO HAPPEN SOMETIME IN THE FUTURE:

- **I'll be meeting** with the CEO tomorrow.
- **We'll be eating** lunch together.

ASKING FOR INFORMATION ABOUT A FUTURE EVENT:

- **Will** the Navajo Indian Irrigation Project **be irrigating** our lands near the San Juan River tomorrow?
- **Will** your friend **be joining** us for dinner tonight?

TALKING ABOUT SOMETHING WE WILL BE DOING IN THE FUTURE:

- In two weeks, **I'll be starting** a new job at the USGS' Navajo Land Use Planning Project.
- I just started making Navajo-style pottery. By New Year's, **I will be crafting** vases like a seasoned professional!

The future continuous can only be used with verbs that describe an action such as swimming and going, not stative verbs, which describe a state of existence, such as being and knowing.

PART 2: NASA TALKS CLIMATE

1 READING

The Earth's climate has changed throughout history. Just in the last 650,000 years, there have been seven cycles of glacial **advance and retreat**, with the **abrupt** end of the last ice age about 7,000 years ago marking the beginning of the modern climate era — and of human civilization. Most of these climate changes are **attributed to** very small variations in the Earth's orbit that change the amount of solar energy our planet receives.

The current warming trend is of particular significance because most of it is extremely likely (greater than 95 percent probability) to be the result of human activity since the mid-20th century and proceeding at a rate that is **unprecedented** over decades to millennia.

Earth-orbiting satellites and other technological advances have **enabled** scientists to see the big picture, collecting many different types of information about our planet and its climate on a global scale. This body of data, collected over many years, **reveals** the signals of a changing climate.

The heat-trapping nature of carbon dioxide and other gases was demonstrated in the mid-19th century. Their ability to affect the transfer of infrared energy through the atmosphere is the scientific basis of many instruments flown by NASA. There is no question that increased levels of greenhouse gases must cause the Earth to warm in response.

Ice cores drawn from Greenland, Antarctica, and tropical mountain glaciers show that the Earth's climate responds to changes in greenhouse gas levels. Ancient evidence can also be found in tree rings, ocean sediments, coral reefs, and layers of sedimentary rocks. This ancient, or paleoclimate, evidence reveals that current warming is occurring roughly ten times faster than the average rate of ice-age-recovery warming.

ANSWER THE FOLLOWING QUESTIONS:

- Does NASA say that climate change is a scientific fact?
- What is meant by “the big picture”?
- Why is there no question that increased levels of greenhouse gases cause the Earth to warm?
- How do tree rings provide evidence for the current warming rate?

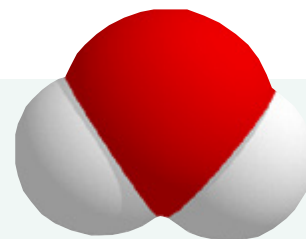
“Climate Change: How Do We Know?” Copyright © 2018.
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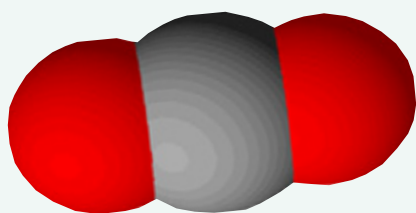
2 GRAMMAR

Choose a gas. Prepare three sentences using any perfect tense to describe what might happen if too much of the gas you choose is produced. Support your claim using scientific research.

Water vapor. The most abundant greenhouse gas, but importantly, it acts as a feedback to the climate. Water vapor increases as the Earth's atmosphere warms, but so does the possibility of clouds and precipitation, making these some of the most important feedback mechanisms to the greenhouse effect.



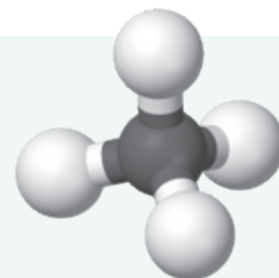
WATER VAPOR (H_2O)



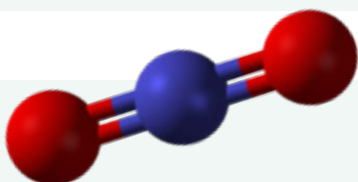
CARBON DIOXIDE (CO_2)

Carbon dioxide (CO_2). A minor but very important component of the atmosphere, carbon dioxide is released through natural processes such as respiration and volcano eruptions and through human activities such as deforestation, land-use changes, and burning fossil fuels. Humans have increased atmospheric CO_2 concentration by more than a third since the Industrial Revolution began. This is the most important long-lived “forcing” of climate change.

Methane. A hydrocarbon gas produced both through natural sources and human activities, including the decomposition of wastes in landfills, agriculture, and especially rice cultivation, as well as ruminant digestion and manure management associated with domestic livestock. On a molecule-for-molecule basis, methane is a far more active greenhouse gas than carbon dioxide, but also one which is much less abundant in the atmosphere.



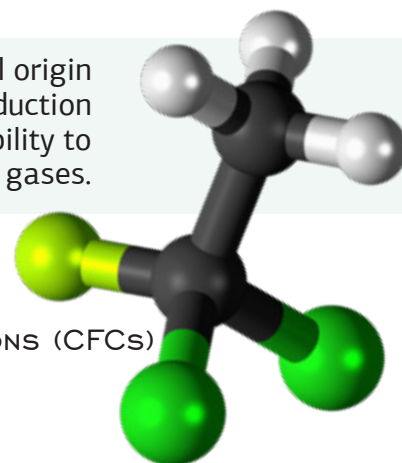
METHANE (CH_4)



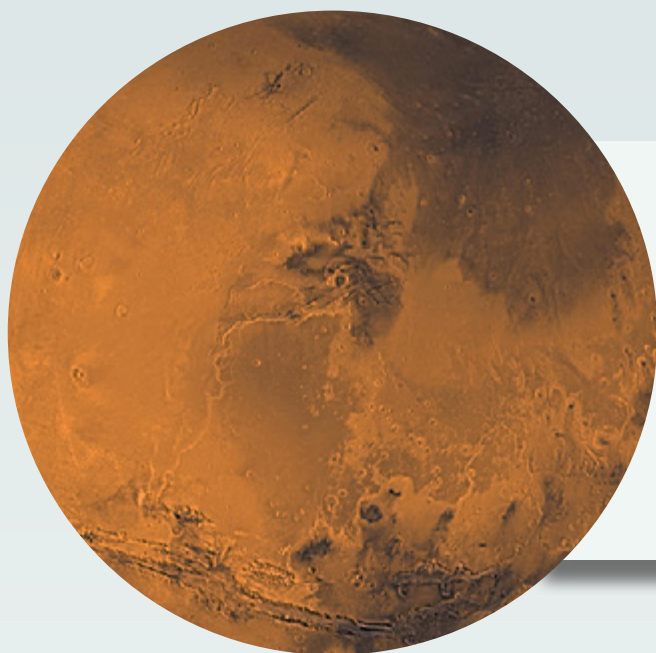
NITROUS OXIDE (N_2O)

Nitrous oxide. A powerful greenhouse gas produced by soil cultivation practices, especially the use of commercial and organic fertilizers, fossil fuel combustion, nitric acid production, and biomass burning.

Chlorofluorocarbons (CFCs). Synthetic compounds entirely of industrial origin used in a number of applications, but now largely regulated in production and release to the atmosphere by international agreement for their ability to contribute to destruction of the ozone layer. They are also greenhouse gases.



CHLOROFLUOROCARBONS (CFCs)



FUN FACTS

NOT ENOUGH GREENHOUSE EFFECT:

The planet Mars has a very thin atmosphere, nearly all carbon dioxide. Because of the low atmospheric pressure, and with little to no methane or water vapor to reinforce the weak greenhouse effect, Mars has a largely frozen surface that shows no evidence of life.

TOO MUCH GREENHOUSE EFFECT:

The atmosphere of Venus, like Mars, is nearly all carbon dioxide. But Venus has about 154,000 times as much carbon dioxide in its atmosphere as Earth (and about 19,000 times as much as Mars does), producing a runaway greenhouse effect and a surface temperature hot enough to melt lead.



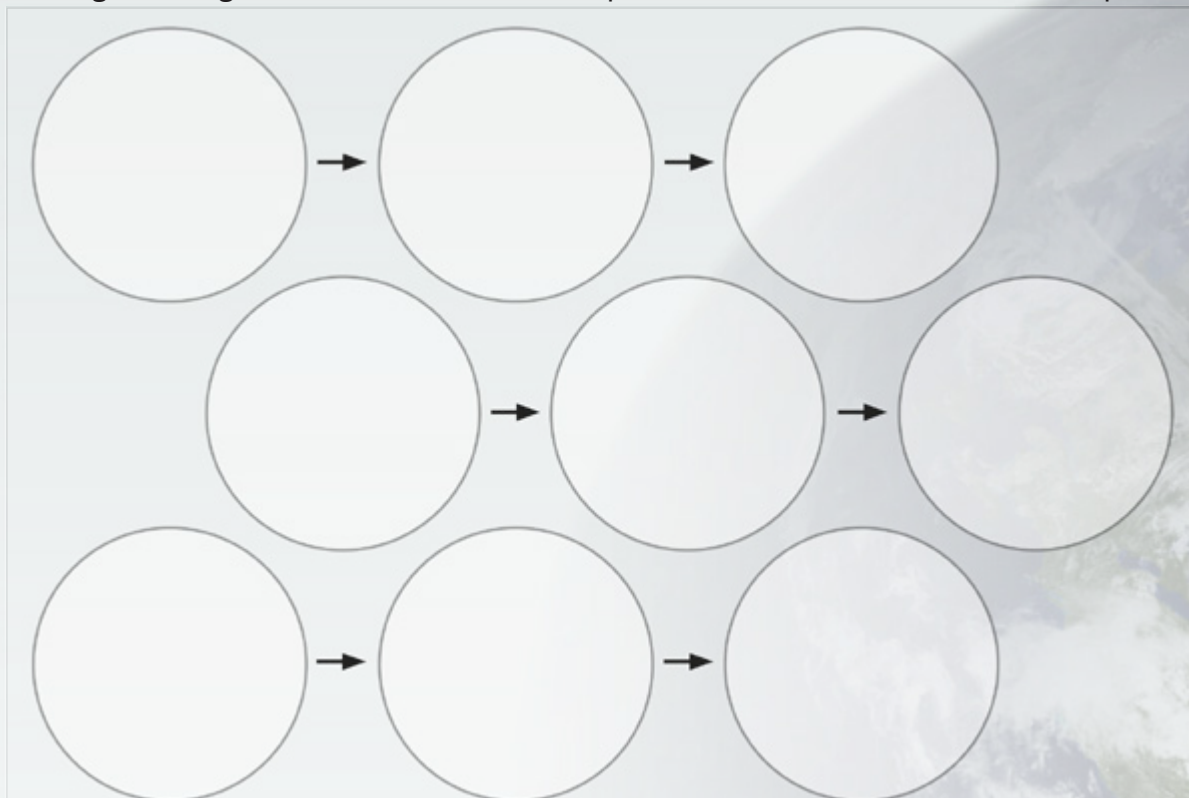
**Choose two other planets.
What are their greenhouse effect?
Get in front of the class and explain.**

On Earth, human activities are changing the natural greenhouse. Over the last century, the burning of fossil fuels like coal and oil has increased the concentration of atmospheric carbon dioxide (CO_2). This happens because the coal or oil burning process combines carbon with oxygen in the air to make CO_2 . To a lesser extent, the clearing of land for agriculture, industry, and other human activities has increased concentrations of greenhouse gases.



CAUSE AND EFFECT

Cause and Effect: According to NASA, fossil fuels may have several consequences. Using the diagram below as a model, map out the cause and effect of each point.



The consequences of changing the natural atmospheric greenhouse are difficult to predict, but certain effects seem likely:

- On average, Earth will become warmer. Some regions may welcome warmer temperatures, but others may not. Warmer conditions will probably lead to more evaporation and precipitation overall, but individual regions will vary, some becoming wetter and others dryer.
- A stronger greenhouse effect will warm the oceans and partially melt glaciers and other ice, increasing sea level. Ocean water also will expand if it warms, contributing further to sea level rise.
- Meanwhile, some crops and other plants may respond favorably to increased atmospheric CO₂, growing more vigorously and using water more efficiently. At the same time, higher temperatures and shifting climate patterns may change the areas where crops grow best and affect the makeup of natural plant communities.

4 LISTENING

Listen to the following passage about “The Role of Human Activity.” Then answer the following questions.

- What is meant by “independent scientific experts”?
- How can we be sure they are indeed independent?
- How do you think scientists came to the figure of 95 percent?
- According to the passage, what type of increase have human-produced gases caused?

CORPORATE RESPONSIBILITY

What do you think this means? What does it entail?

Corporations are often responsible for affecting large segments of society. These segments include the local communities, employees, and customers. Often, corporations will finance projects to give back to the community they affect.

5 RESEARCH

Find one company in Russia and one in the United States that works in areas with a high concentration of indigenous peoples. How does each company interface with the local indigenous population?

1. Would you consider their relationship positive or negative?
2. What measures has the company done to endear itself to the local community?
3. If they have been any difficult situations, how has that company resolved the issue?
4. What has been the role of the non-indigenous population in corporation-indigenous population issues?
5. Has the company made a positive or negative impact on the natural environment?
6. If the impact has been negative, do the corporate responsibility measures address them or an entirely different sector (e.g., polluting a river then building a library)?



Corporate Responsibility

WRITE TO CORPORATE RESPONSIBILITY DEPARTMENTS

Written by Joshua Schiefelbein

6 WRITING

- Once you have identified several corporate responsibility departments, prepare to write an e-mail.
- Practice the following tasks then apply their principles to the task above.

E-MAILS

Exercise 1. Compare and Contrast

The table below includes a personal e-mail and a business e-mail. What similarities and differences do you see? Take note of the structure and style of language.

PERSONAL	BUSINESS
<p>Hi Catherine!</p> <p>It was awesome catching up with you over a cup of coffee. Seriously, chilling out with you is always fantastic!</p> <p>As I'll be in Russia for the next few months, what's your Skype? I'd love to share with you some of the experiences I'll have over there.</p> <p>Also, we should meet up one last time before I head out. When's good for you?</p> <p>Enjoy the weekend!</p> <p>See you soon!</p> <p>Mike</p>	<p>Hello Kristina,</p> <p>Thank you again for meeting with me this afternoon. As requested, I have scheduled a follow-up meeting next week with Maria for Tuesday afternoon at 4 p.m. Could you please confirm that you are available for this time?</p> <p>I look forward to seeing you soon, and have a great weekend.</p> <p>Best, Michael</p>

7 GRAMMAR

Exercise 2. Expressions

In the table below, provide alternative phrases that could be used in either e-mail.

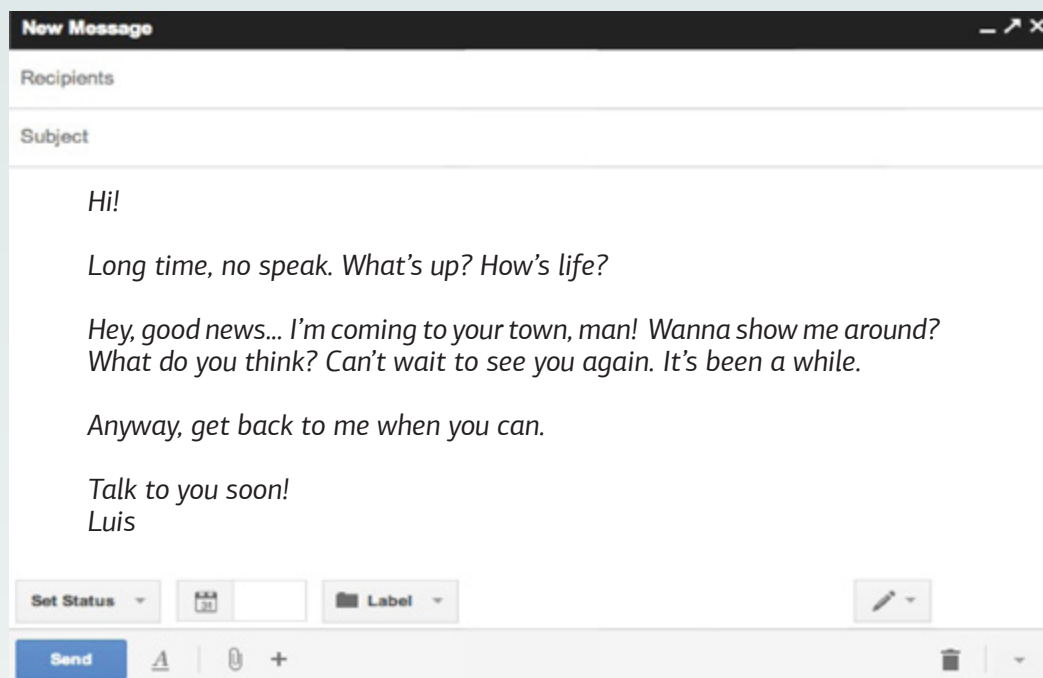
	PERSONAL	BUSINESS
Greetings	Hi! _____ _____	To Whom It May Concern _____ _____
First paragraph	It was great meeting up with you for coffee. _____ _____	Thank you again for meeting with me this afternoon. _____ _____
Final paragraph	Enjoy the weekend! _____ _____ _____	I look forward to meeting you again soon. _____ _____
Closing	See you soon! _____ _____	Best Regards _____ _____

8 WRITING

Exercise 3. Informal E-mail Practice

Your friend from Spain has just sent you the following e-mail.

Write a friendly, informal response using some of the expressions you thought of in Exercise 2. Be sure to answer his questions, accept his invitation to meet up, and ask about a specific time, day, and location.



The screenshot shows an email client window titled "New Message". It has fields for "Recipients" and "Subject". The body of the email contains the following text:

Hi!

Long time, no speak. What's up? How's life?

Hey, good news... I'm coming to your town, man! Wanna show me around? What do you think? Can't wait to see you again. It's been a while.

Anyway, get back to me when you can.

Talk to you soon!

Luis

At the bottom of the email window, there are buttons for "Set Status", "Label", and "Send". There are also icons for attachments and a trash can.

Exercise 4. Business E-mail

As a music lover and die-hard fan of live concerts, you've travelled far and wide to dance a few meters from your favorite artist while they perform on stage. Still, you're getting older and a bit tired of travelling. Why can't great music groups like Arcade Fire or Beach House just come to your town? Why do they always go to the larger cities? Do the venues in smaller cities not have a high enough capacity or the wherewithal to host major events? These days, tour managers for a mega artist like Drake must choose venues carefully. For example, even the height of the roof must fall within certain parameters in order to accommodate advanced lighting and pyrotechnic equipment. Anyway, their reasons for not coming to your hometown don't matter. You're a person of action, and you're an excellent persuasive writer! They will come!

Send a persuasive e-mail to your favorite musician or their manager. Try to convince them to perform in your town. Remember, you're going to have to sell the venue, i.e., convince them that it can accommodate a major production. Furthermore, you will have to guarantee them that the concert will be worth it: financially, socially, and personally. Try to elicit an emotional reaction from the reader with your writing.

Remember, this is a formal e-mail, and there are some general rules that must be followed. For example:

a. When you are writing informally, it is okay to use contractions like *we're*, but they should be avoided when writing formally.

b. More importantly, colloquial (slang) contractions like *wanna* instead of *want to* are an even more serious faux pas and should definitely be avoided. It is important that all colloquialisms (words, terms, phrases) be avoided.

c. Make sure that your salutations and conclusions are *formal*. For example:

To Whom It May Concern (salutation)

d. Anecdotes (personal stories) can make your writing more appealing to the reader, but be careful; sometimes anecdotes become tangential, and your writing will lose focus. Keep it informative, yet simple. There is no need to overcomplicate things.

e. Always have a writing partner read your work before you send/submit something. A good writing partner does not just check your work for grammatical and spelling errors; he or she should give you constructive advice regarding what worked well and what might need a second look.

PART 3: SPECIAL RAPPORTEUR

Both Russia and the United States have legislation to protect various aspects of indigenous people's lives. In addition, dozens of grassroots organizations advocate for their specific demographic. On an international level, the United Nations has a Special Rapporteur who helps identify and resolve issues pertaining to indigenous populations. Read the profile below of the current Special Rapporteur!

1 READING

My name is Victoria Tauli-Corpuz — and I am the Special Rapporteur on the rights of indigenous peoples. I am myself an indigenous leader from the Kankana-ey Igorot people of the Cordillera Region in the Philippines and have been an indigenous activist for many decades, before I was appointed Special Rapporteur in 2014.

The Special Rapporteur works around the clock to address the obstacles that indigenous peoples continue to face to achieve their rights. According to the mandate, the Special Rapporteur has four main functions: 1) to promote good practices, including laws and government programmes related to indigenous peoples' rights, 2) to report on the human rights situation of indigenous peoples in particular countries, 3) to go into dialogue with governments about specific allegations of violations of the rights of indigenous peoples, and 4) to conduct thematic studies on issues related to promoting and protecting the rights of indigenous peoples.

Since I was appointed Special Rapporteur on the rights of indigenous peoples in 2014, I have been visiting several countries, including most recently Guatemala, Mexico, the United States of America, and Australia in 2017 and 2018. In each country, I meet with indigenous peoples' organisations and representatives, governments,

private sectors, and other actors to understand the situation on the ground and provide recommendations in my mission reports. I have also studied several **thematic issues** of relevance to the rights of indigenous peoples globally, including the impact of climate change, conservation projects, and international trade agreements on indigenous peoples; criminalisation and attacks against indigenous human rights defenders; the situation of indigenous women and girls as well as indigenous peoples; and the Sustainable Development Framework. In the coming year, I am still going to look further into these issues, while also focusing on indigenous peoples' own governance and justice systems.

In addition to my country and thematic reports, I have been engaging in dialogue with governments around the world related to specific cases of alleged violations of the rights of indigenous peoples. Several of these dialogues have had **concrete impact**, like this year when the European Commission decided to suspend a climate change project in Kenya **pending** an assessment of its human rights compliance — just after I and other special procedures had sent a communication about evictions and violence against indigenous Sengwer due to the project. This is just one out of many examples.

ANSWER THE FOLLOWING QUESTIONS:

- What organization does the Special Rapporteur belong to?
- What is Tauli-Corpuz's main task?
- What is meant by "thematic issues"?
- Use *pending* in a sentence about your own life.
- How might the Special Rapporteur assist the U.S. government?
- Create three questions you would ask Special Rapporteur Tauli-Corpuz.



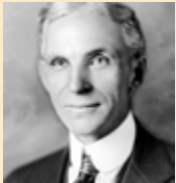
PART 4: ENTREPRENEURSHIP

1 VOCABULARY

What is entrepreneurship? Who is an entrepreneur?
Use these words to try to define the what and the who:

CREATION RISK WORK ETHIC ORGANIZATION
DETERMINATION CONFIDENCE INNOVATION

Match faces with the things they invented, then to famous quotes, then to their place of birth.



Henry Ford



Steve Jobs



Nikola Tesla



Madame
C.J. Walker



Roman
Abramovich



Yuri Milner



Thomas Edison



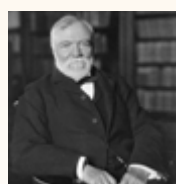
Benjamin
Franklin



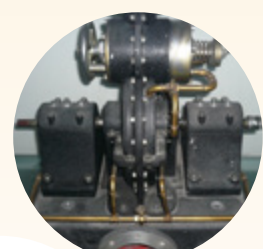
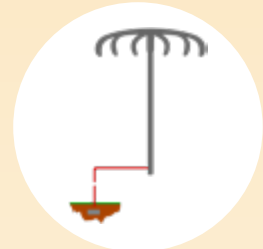
Oprah Winfrey



Ida Rosenthal



Andrew
Carnegie



DST

"I am not ashamed of my past. I am not ashamed of my humble beginning."

"Failure is simply the opportunity to begin again, this time more intelligently."

"Lots of people want to ride with you in the limo, but what you want is someone who will take the bus with you when the limo breaks down."

"I do not think you can name many great inventions that have been made by married men."

"No man will make a great leader who wants to do it all himself, or to get all the credit for doing it."

"Like any new idea, the first airplane was not a jet."

"I have not failed. I've just found 10,000 ways that won't work."

"You have to travel globally today to know what's going on and maintain an edge."

"Sometimes when you innovate, you make mistakes. It is best to admit them quickly, and get on with improving your other innovations."

"We are all born ignorant, but one must work hard to remain stupid."

"The trophy at the end is less important than the process itself."

USA
MISSISSIPPI

USA
MICHIGAN

SCOTLAND
DUNFERMLINE
USA
ALBUQUERQUE

USA
NEW YORK
USA
LOUISIANA

USA
OHIO
USA
ILLINOIS

USA
TEXAS
USA
CONNECTICUT

USA
MASSACHUSETTS
CROATIA
SMILJAN

USA
CALIFORNIA
RUSSIA
SARATOV

BELARUS
MINSK
RUSSIA
MOSCOW

DESIGN-LAUNCH RUN-RISK

2 READING

WHERE TO GET FINANCING?

VENTURE CAPITAL | GOVERNMENT GRANTS | BUSINESS-FRIENDLY NGOS

Form a sentence with: recognize opportunity-potential-commercial-entrepreneur-profit.

ENTREPRENEURIAL SPIRIT IN RUSSIA AND THE UNITED STATES.

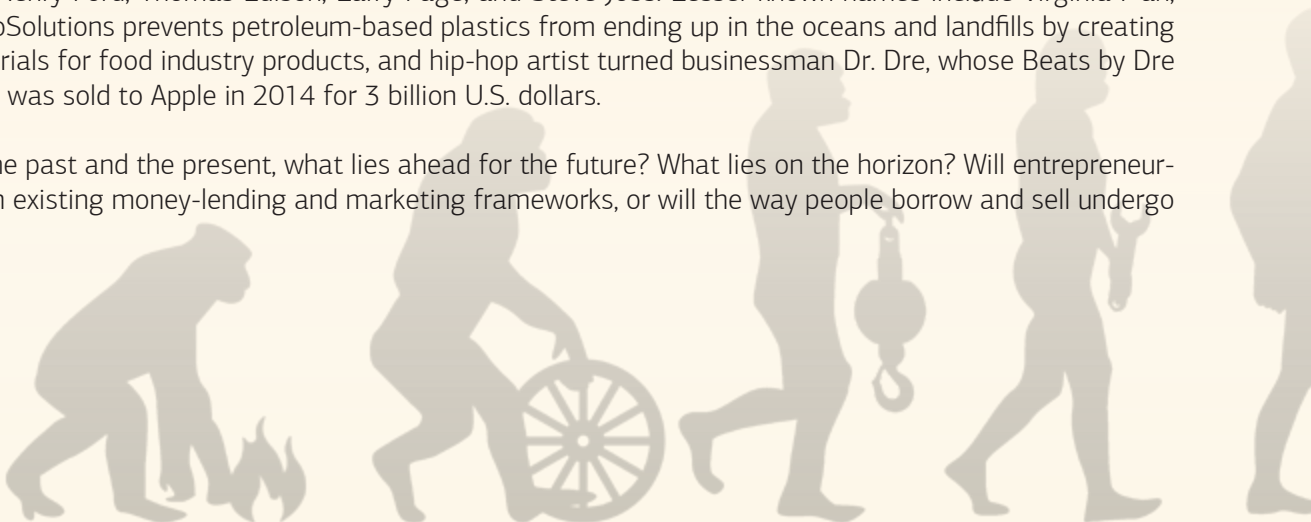
Do you have a good idea or invention? Do you think you can turn it into a **profitable** innovation? Are you fearless in the face of risks? Then you might be the next big entrepreneur. But surely it takes more than just an idea before you become the next Steve Jobs or Sergey Brin. There are several elements to consider. First, where are you going to get the money to produce and market your product? Do you have a super-rich grandmother? Well, if yes, then great! If not, you're going to need to borrow money or find investors. If you don't have a lengthy job history or **collateral**, it's doubtful banks will give you the loan you need. In that case, you'll need to get a small business loan from the government or seek the help from venture capitalists or NGOs. Once you've **obtained** the money, you have to successfully market your product. Entire books have been written on this subject, so it's probably not going to be simple.

Both Russia and the United States are full of entrepreneurial spirit these days. That's good news if you're living in one of these two countries or planning on moving there. This rise in entrepreneurial spirit is impressive given the history of the two countries and the two very different paths they've taken over the years. Although tsarist-era Russia produced notable entrepreneurs, during Soviet times, entrepreneurship was virtually unknown until the period of restructuring in the 1990s known as perestroika. State enterprises consumed the talent pool, and inventions such as Sergei Korolev's contributions to the first satellite in history (Sputnik) and the R-7 intercontinental ballistic missile along with Alexei Tupolev's supersonic jet were the property of the Soviet State. There was no possibility for man to start up his own private firm and sell their intellectual property. This all changed soon after the collapse of the Soviet State.

These days, Moscow and Saint Petersburg constantly rank high for entrepreneurship. Men like Pavel Durov, founder of VKontakte (VK) and Telegram Messenger, have made hundreds of millions and, in some cases, billions of dollars in the tech and industrial sector. Relatively low **corporate tax rates**, lower salaries, and an educated **pool** of talent mean that running a business doesn't cost a lot of money. Math and science skills, both emphasized during the Soviet period, are still very much a focus of the Russian education system. This means that Russia, despite the many economic challenges it has faced over the years, is still able to maintain and expand its **reputation** as an international leader in the tech sector. Adding to this mixture is one essential ingredient: willingness to take measured risks. Whereas many American entrepreneurs focus on a single company, diversification is common among young Russian entrepreneurs. This may be a logical response to industry **volatility**, but it might also be a **distinctly** Russian **mind-set** that arose due to the many challenges Russians have faced in recent history.

"Necessity is the mother of invention" is a famous expression, and this is how the United States began, through fur trade with Native Americans and other colonists. From there, entrepreneurship took off. In fact, one might say that the United States' role as a world power was **catalyzed** by entrepreneurs such as Andrew Carnegie, Cornelius Vanderbilt, Henry Ford, Thomas Edison, Larry Page, and Steve Jobs. Lesser known names include Virginia P'an, whose Yumi EcoSolutions prevents petroleum-based plastics from ending up in the oceans and landfills by creating bio-based materials for food industry products, and hip-hop artist turned businessman Dr. Dre, whose Beats by Dre earphone brand was sold to Apple in 2014 for 3 billion U.S. dollars.

If we know the past and the present, what lies ahead for the future? What lies on the horizon? Will entrepreneurship work within existing money-lending and marketing frameworks, or will the way people borrow and sell undergo



a paradigm shift? Certainly, the types of products and companies will change. One example of a major change has been the recent focus on social entrepreneurship. Rather than focus solely on their bottom line, social entrepreneurs address social or environmental issues. This may be a device designed to catch moisture in arid parts of Africa or an e-commerce platform to improve access to toilets in rural parts of India. Even governments have gotten involved by creating programs to aid in small- and medium-sized enterprises (SMEs) aimed at societal betterment. The U.S. Department of State, for example, coordinates the African Women's Entrepreneurship Program, which aims to "dismantle the obstacles to business opportunities and economic participation that African women face" by organizing networks of women entrepreneurs operating SMEs. Sometimes anticipating a societal mood results in a **visionary** becoming an entrepreneur. What does society want next?

ANSWER THE FOLLOWING QUESTIONS:

- a. Success for an entrepreneur must be measured. How do you think the metrics differ between solely for-profit entrepreneurs and social entrepreneurs?
- b. Why do you think crowdfunding and social media might benefit social entrepreneurs more than solely for-profit ones?
- c. Soviet astronaut Valentina Tereshkova was the first woman in space. Sally Ride was the first American woman in space. Based on these accomplishments, would you consider either woman an entrepreneur?
- d. Could you rearrange the reading passage so that paragraph three was switched with paragraph two and not lose coherence?
- e. Could paragraph four be switched with paragraph one?
- f. Paragraph one uses the word *surely*. Many students confuse this with *surlly*. What is the difference between the two words?
- g. What has been the most recent paradigm shift in how entrepreneurship has developed in your country?
- h. What conditions might stifle entrepreneurship?

3 RESEARCH

IMMIGRANTS AS ENTREPRENEURS

- Where was Sergey Brin born?
- How did growing up in Russia impact Sergey as a child in the United States?
- How did Sergey Brin and Larry Page raise enough money to start up Google?
- Is Alphabet an example of entrepreneurship?

4 RESEARCH

OPPORTUNITIES FOR INDIGENOUS POPULATIONS

Where to start?!

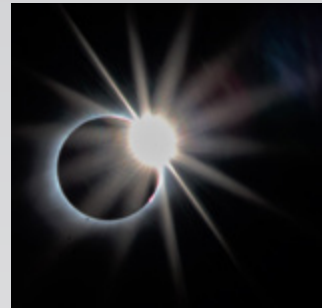
There are several entrepreneurial opportunities reserved for people of indigenous heritage. Below are blurbs of a few. Choose one. Then search for NGOs that deal with local indigenous populations or schools that have a relatively high percentage of students with indigenous heritage in your country. Write to them and see if they're aware of these opportunities. You might even suggest a collaborative project!

*Independent Management
for Entrepreneurial Ventures
Native American Entrepreneurs
Office of Native American Affairs
Indigenous Fellowship Programme
SBA Business Development Programs*

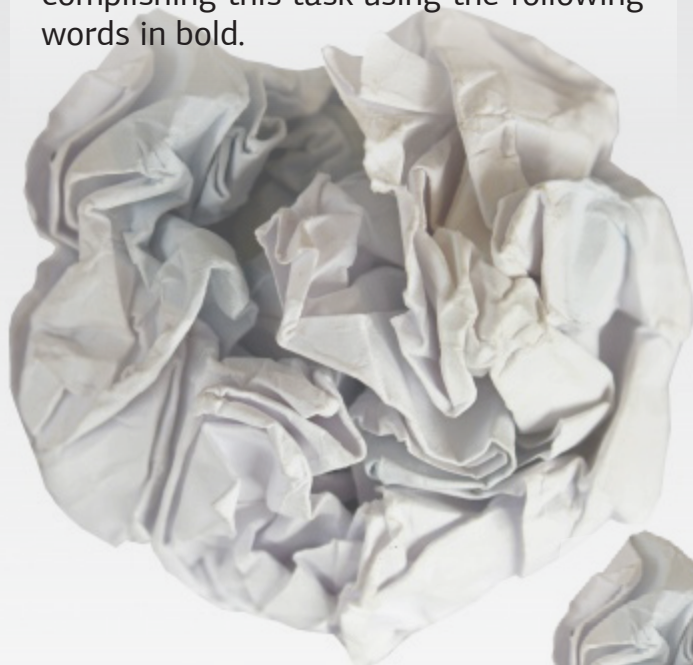
PART 5: FUTURE PROBABILITY

1 GRAMMAR

Form sentences for the following photos. Is there a high, medium, or low probability that the action is going to take place?



Take out a sheet of paper and **fold** it in two. **Rip**. On each part, **draw** a picture of something you plan on doing in the future. **Roll** it into a ball. **Have** a snowball fight. **Pick up** the papers. If you pick up your own snowball, **drop it** and find another. When you have two, try to **guess** what the person is planning on doing. **Find** them. Then **figure out** the probability [high/medium/low] of them accomplishing this task using the following words in bold.



HIGH

- **I will** go to Ulan-Ude.
- **I will certainly** go to Ulan-Ude.
- **I will probably** go to Ulan-Ude.

MEDIUM

- **I may** go to Sakhalin.
- **I could** go to Sakhalin.
- **I might** go to Sakhalin.

LOW

- **I probably won't** go to Chukotka this trip.
- **I won't** go to Chukotka this trip.
- **I certainly won't** go to Chukotka this trip.



2 SPEAKING

MODERATING DISAGREEMENTS

...of three (you, opponent, moderator).

Get into groups of three. One person will defend a statement from below, the other argues against it, and the moderator chooses a side while trying to account for view.

Example:

*Dana: There's **a good chance** the polar ice caps might melt and devastate coastal cities.*

*Robert: That's ridiculous! I **doubt** that large sheets of ice can melt.*

Lana [moderator]: While Robert's skepticism is not without merit, Dana's view is supported by many reputable scientists and journal articles.

3 RESEARCH

RENEWABLE ENERGY

Now let's take a more positive spin on our environment. A lot of alternative energy sources are being employed around the world. These include, but are certainly not limited to, wind, electric power batteries, geothermal, and biomass. Research.

Choose eight sources and place them on separate papers [hint: just fold paper into eights to save paper]. Shuffle the sources. Each group of three students receives one paper. The first student will start with "what will happen if"; the second student refutes his or her statement with a logical or popular statement. The third student accounts for both arguments but decides in favor of only one.

4 LISTENING

LISTEN TO MAX TALK ABOUT WIND ENERGY. THEN ANSWER THE FOLLOWING QUESTIONS.

- What are the advantages and disadvantages of wind energy according to Max?
- Where is wind energy most popular?
- What is a wind turbine?
- Why don't more countries use wind energy?
- What role does the media play in wind energy?



Statements:

- There's a good chance that climate change will change the traditional way of life for many indigenous peoples.
- New techniques of oil extraction probably won't affect nomadic people.
- It's possible that too many industrial companies dumping waste in Lake Baikal will destroy its unique ecosystem.
- Buffalo soldiers _____.



- Washington Redskins controversy _____.



5 RESEARCH

Russia and the United States both use wind energy. Find out (1) where it's used most and least; (2) the position of different states [choose four]; and (3) whether the Russian and American governments promote wind energy.

Used To

6 RESEARCH

Intergenerational shifts in lifestyle mean that not all situations are the same as they once were. Look at the following photos. What did these people used to do?



7 RESEARCH

RESEARCH: DO THEY STILL ENGAGE IN THESE ACTIVITIES?

Use “used to” to form sentences with the words below. You may have to use the internet for research.

1. Chukotka, 1940s, schools, until, no
2. Chukchi, ivory, walruses
3. Modern conveniences, live, amenities, Buryats, now
4. Hogans, religious, Navajo, cultural, live, purposes, still
5. Dolgans, nomadic, collective farms, reindeer herders, Soviet

8 WRITING

You have just read a great article on the environment and like it. In fact, you like it so much you go to the Comments section and write:

Comments:

Type your comment:

Great article! So clear, so true! If more people understood environmental issues like that, the world would be a better place.

You check back later, and you’ve gotten 51 likes. Pretty good! But you’ve also got two replies.

Your face begins to blush red. You feel your palms begin to sweat. How dare this anonymous person say something like that! He doesn’t know you! She doesn’t know you! You want revenge! But how far are you willing to go?

So true! You really hit the nail on the head. If only more people...

Hey moron! That was like the stupidest, most colossally idiotic remark I’ve ever read. Stop writing from your mom’s basement and grow up!

Exercise: Get into groups of four. Each group writes a paragraph about an environment-related topic. Then pass your paragraph clockwise to the next group. Each group will make comments on your paragraph or comments on others’ comments.

9 RESEARCH

Right or Responsibility

A right is a protected freedom such as religion. A responsibility is a duty, such as doing your homework. Look at the following photos. Which are rights? Which are responsibilities? Which are both? Add two of your own at the bottom!



PART 6: FORESTS

1 READING

READ THEN ANSWER.

When European settlers first arrived in the New World, they saw many forests with a lack of undergrowth and vast prairies that seemed to go on forever. They thought they had discovered “virgin,” “untouched” lands. This belief was in line with the prevailing beliefs of the time. Moreover, under the Doctrine of Discovery issued by the pope, European colonial forces were granted exclusive rights to the resources of these newly discovered lands. This right was granted **irrespective** of the local indigenous peoples’ natural rights. The colonists were largely unaware that the state of the forests, and the entire ecosystem, was often a result of Native American forest-management techniques.

It arose from the dialectic of two opposing worldviews: separation of civilization and wilderness versus a belief in the synergy between man and the natural world. The latter view was grounded on notions of **interconnectedness** and **sustainability**. Responsible **resource management** includes fulfilling the needs of the community — not needlessly overusing and wasting. Balancing ecological and societal needs requires a stewardship strategy that preserves and protects our environmental resources for future generations. Such a model is even more compelling given that forests frequently play a significant role in the economic structure of Native American reservations. Revenue is generated from **timber**, foods, as well as hunting and fishing.

1. What physical features of the New World might have given European colonists the impression that it was “pure”?
2. What were the immediate implications of colonists having a different connection to the land than Native Americans?
3. Think intuitively for this question. Would indigenous populations have stronger ties to the land than non-indigenous populations? Do you think your intuition is supported by evidence?
4. Provide an example of resource management in a different context. Try to find an example from your everyday life.
5. In your own words, explain the difference between a natural right and a legal right.
6. In your opinion, how can we encourage people to reconnect with nature and embrace environmental stewardship?

2 RESEARCH

CONTEMPORARY CHALLENGES: GET INTO GROUPS. CHOOSE A PHOTO BELOW. TAKE TEN MINUTES TO RESEARCH HOW THE CHOSEN IMAGE PRESENTS A CHALLENGE TO MAINTAINING TRIBAL FORESTS.



3 SPEAKING

NATIONAL FORESTS: WHERE WOULD YOU GO?

Choose a forest. Get into pairs. One student will be a journalist and the other will play the role of an interviewee. [Don't forget to mention activities, landscape, towns surrounding the forest, equipment, etc.]



4 LISTENING

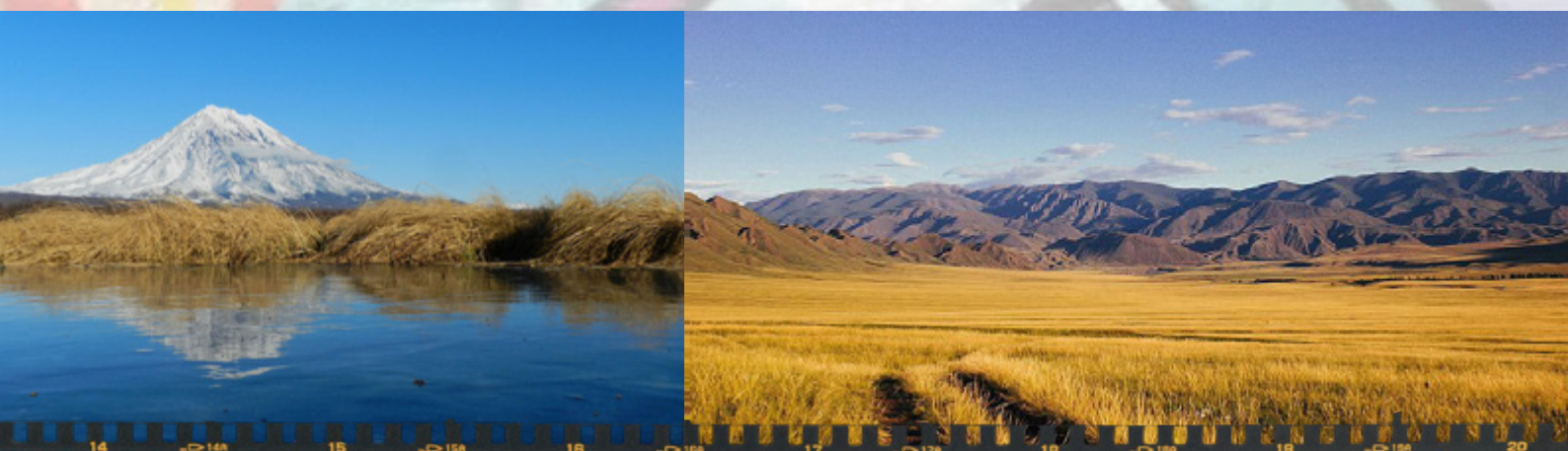
1. How do you kill Koshei?
2. Where does Mother-Yoginya take the children that she kidnaps?
3. Describe Leshey's physical appearance and physical qualities.
4. Based on the context, what do you think "otherworldly" means?
5. What do the words *fore* and *shadow* mean, and how does the meaning change when they are combined?
6. What do you think about the origins of these mythical characters?
7. Do you see it as possible that the positive character of Mother-Yoginya was converted into an evil one of Baba Yaga? Why do you think so?
8. Compare these forest fairy-tale characters from Rus' to those in your culture.
9. Who would win in a fight between Koshei and Leshey?
10. Did the people of ancient Rus' invent these myths to calm or excite their children? Or are these indeed the manifestations of the mystical Russian forests?



PART 7: VACATIONING

1 RESEARCH

Indigenous peoples live across some of the most beautiful terrain on our planet. Below are four photos of places indigenous groups live in Russia. Think of some things you would do there on vacation. What equipment would you bring, for instance?



2 SPEAKING

Pair up. Imagine you're sitting on a plane and get into a discussion with the person next to you about vacations. After he or she describes his or her past and future vacations, you do the same. Use **used to** / **would** and the **future continuous**.

Examples:

*I **used to** go with my family to different national parks for vacation, but now we each go our separate ways. I guess that's part of growing up: everyone has their own interests.*

*Next vacation, **we'll be going** to South Sudan. I heard it used to be dangerous, but the capital Juba is okay now.*

“USED TO” VS. “WOULD”

3 GRAMMAR

You can use **“used to”** to talk about things you did regularly in the past or situations you were in at some point in the past. For example:

*I used to live on the Navajo Nation Reservation before I moved to Phoenix, Arizona. *This is an example of a past situation or state.*

*My father used to practice his dance routine for the Navajo State Fair every weekend. *This is an example of something that was done regularly or a habitual activity.*

Alternatively, you can use **“would”** to talk about things you did regularly in the past, but you **cannot** use **“would”** to talk about situations you were in. For example:

“I would live on the Navajo Nation Reservation before I moved to Phoenix, Arizona” is an incorrect use of the word “would.”

However:

“My father would practice his dance routine for the Navajo State Fair every weekend” is completely acceptable.

Don’t confuse **“used to + infinitive”** with **“used to +ing verb”** [get used to something].

4 GRAMMAR

Fill in the blanks below with “used to” or “would,” and if either one of them is acceptable for a sentence, please use “would.”

1. My father tells me stories about how the Navajo Tribe _____ do more activities that connected them to the land.
2. A long time ago, my ancestors _____ chant and paint images in the sand using things like charcoal and clay in order to heal the sick.
3. Your father _____ own a herd of sheep before he got sick and had to move to the city, didn’t he?
4. When I first moved to Los Angeles, I was so lonely and homesick. I _____ dream about sitting on my living room floor back home and watching my grandmother weave the wool from my father’s sheep into beautiful traditional clothing.
5. Traditional Navajo culture _____ be at risk, but there has been a resurgence in recent years.
6. As a member of the Navajo Tribe, I _____ get upset when I saw Navajo costumes for sale for Halloween, but now I understand that most people are unaware of the negative effects of cultural appropriation.
7. I _____ be embarrassed of my heritage when I moved away from home, but I’ve learned to embrace my identity.
8. Many of my friends _____ think that Navajo people aren’t patriotic Americans, but they were surprised when I told them that the Navajo Nation has a proud tradition of serving in the U.S. military.

5 SPEAKING

TRUTH OR DARE

Did you use to leave the toilet without flushing? Have you ever done something inappropriate on an airplane? In groups, play truth or dare. Try to use “used to” or “would” as much as possible.

MUSIC AND GRAMMAR

6 LISTENING

Listen to the following songs. Fill out the table below:

	SONG	ARTIST	IMAGERY	THEME	GRAMMAR	
	<i>We Used to Wait</i>	<i>Arcade Fire</i>				
	<i>It's Only Love</i>	<i>Sheryl Crow</i>				
	<i>Sitting on the Dock of the Bay</i>	<i>Otis Redding</i>				
	<i>All Across the Universe</i>	<i>The Beatles</i>				
	<i>We Used to Vacation</i>	<i>Cold War Kids</i>				
	<i>You Will Be Mine</i>	<i>Faith Hill</i>				
	<i>I Used To</i>	<i>LCD Soundsystem</i>				

****Remember:** Don't confuse +ing verbs with gerunds.
I love to study/studying English.

7 LISTENING

DIALOGUE: "SCHOOL'S OUT FOR SUMMER"

1. Where was Peter's last vacation?
2. Who likes family vacations more: Peter or Shaheen?
3. What are the Gran Tetons? Shaheen says "anyhow" as a response to Peter's rabbit remark. Create a full sentence to replace "anyhow."
4. Can you figure out the difference between Shaheen's use of the word *would* versus Peter's?*

***Note:** Here the word *would* is being used to express two distinct time frames. Verbalize the difference.

8 GRAMMAR

Use the schedule below to write sentences in the future continuous.

Example: I will be showering.

Then, choose three times to ask questions in the future perfect continuous.

Example: Do you think you will have finished showering by the time the van gets here?

For 12:00 – 23:59, create your own narrative.



05:00 wake up

06:00 dress and final packing

06:45 hit the road

08:30 arrive at campsite

09:00 put up tent

12:00

14:30

17:45

21:00

23:59

PART 8: REACHING CONSENSUS

Barrier
Crack
(a problem)

Stakes

Interdependent
Coordinate

Expertise

Intense

Scarcity
Sector

Miners

Humility
Trapped

Crystal clear
Mind-set

1 VOCABULARY

Look up the meaning of the words in bubbles, then form sentences out of the word combinations below.

2 LISTENING

TED TALKS

Watch Amy Edmondson's TED Talk "How to Turn a Group of Strangers into a Team." If you need, also read the transcript. Then answer the following questions:

1. Why must sports teams, hospital workers, and film animators often differ in their teamwork strategies?
2. What do you think Unilever CEO Paul Polman means by "big teaming"?
3. Can you think of a problem affecting your community that could be solved if the right people were invited in to help?
4. Explain the term "situational humility."
5. At around eight minutes, Edmondson says, "And they were willing to take risks to learn fast what might work." What were they risking?
6. Explain what Edmondson means by "psychological safety."
7. What did Abraham Lincoln mean by "I don't like that man very much. I must get to know him better."?
8. In the first paragraph, Edmondson uses the future tense together with the past perfect, then moves to the present: "has left 33 men trapped half a mile" then "They will find...will be brought" then "This remarkable story is a case study." Validate her choice.

1. Most/experience/intense
2. Expertise/valued/company
3. Problem/solution/coordinate/countries/between
4. Crystal clear/mistake/might
5. Stakes/lose/afford
6. Sector/work
7. Opposite/humility
8. Economics/scarcity
9. Generation/different/mind-set
10. Interdependent/from

3 READING

WATCH MARIANO SIGMAN AND DAN ARIELY'S TED TALK "HOW CAN GROUPS MAKE GOOD DECISIONS?" THEN GO ONLINE AND READ THE TRANSCRIPT. TRY TO FIGURE OUT THE MEANING OF THE VOCABULARY WORDS BELOW.

Vocab: hinder; interact; debate; reasonable; estimate; accurate; moral dilemma; self-consciousness; broad diversity; cosmetic change; trend; statistically sound; outlier; intuitive; polarized; deliberation

- Mariano Sigman talks about crowds thinking independently. How can a crowd (many) think independently (individual)?
- What idea does Sigman and his colleague Dan Ariely set out to test?
- Do you agree with the way Sigman and Ariely tested their hypothesis? Can you think of a better way?
- What is meant by "high-confident grays," and why are they more likely to reach consensus than other people?

4 SPEAKING

PRISONER'S DILEMMA: HOW WOULD YOU ACT?

You and your friends are arrested by the police. However, the police don't have enough evidence to convict either of you.

So, they put you in separate rooms and offer you both the same deal.

YEARS IN PRISON	C	D
C	1, 1	-10, 0
D	0, -10	-5, -5

If one of you testifies for the prosecution (defecting) and the other keeps quiet (cooperating), then the defector goes home to his family and the cooperator goes to jail for half a decade.

If both of you remain silent, each gets a one-year sentence. If you rat each other out, both get three-year jail terms.

During the interrogation, each suspect is assured that his or her friend will know nothing about his or her betrayal. How should they act?



Divide the class into two. Ideally, you will have two classrooms. Instead of jail time, you will work for points. Instead of prison sentences, you will have two words: Moscow and Washington, D.C.

Selecting Moscow will earn you five points if the other group chooses D.C. If you both choose D.C., you'll each get three points. If you both choose Moscow, you'll each lose one point.

You'll play this game for ten iterations. Before the third and eighth rounds, you get to send a negotiator to a neutral place to discuss your upcoming choices.

Tally up the scores. Get into pairs. Reflect on your choices. Were you able to reach consensus within your group? With the other group?

If so, how long did it take? What strategies did you use (whether you succeeded in reaching consensus or not)?

PRIORITIZING

Get into an even number of teams (i.e., 4, 6).

a. STRANDED ON A DESERTED ISLAND

You enjoy kayaking. So along with a few friends, you bought a few kayaks on sale at the local sporting goods store. You spend the early morning and afternoon kayaking on the Pacific Ocean, but then...there is a storm. Now you're stranded on a deserted island in the South Pacific. There are no animals. Only coconut trees.

Rank the following items in order of priority.

- | | |
|--|--|
| <input type="checkbox"/> Mosquito netting | <input type="checkbox"/> A complete tackle box |
| <input type="checkbox"/> A bottle of tequila | <input type="checkbox"/> First-aid kit |
| <input type="checkbox"/> Handheld GPS | <input type="checkbox"/> Local ocean map |
| <input type="checkbox"/> Small transistor radio | <input type="checkbox"/> Flair gun with two extra flairs |
| <input type="checkbox"/> Utility knife | <input type="checkbox"/> Mp3 player with a really nice speaker |
| <input type="checkbox"/> 10 meters of rope | <input type="checkbox"/> Mascara |
| <input type="checkbox"/> Box of chocolate truffles | <input type="checkbox"/> Lipstick and facial foundation kit |
| <input type="checkbox"/> 7 protein bars | <input type="checkbox"/> 20 liters of mineral water |
| <input type="checkbox"/> A fishing rod | |

REFLECTION:

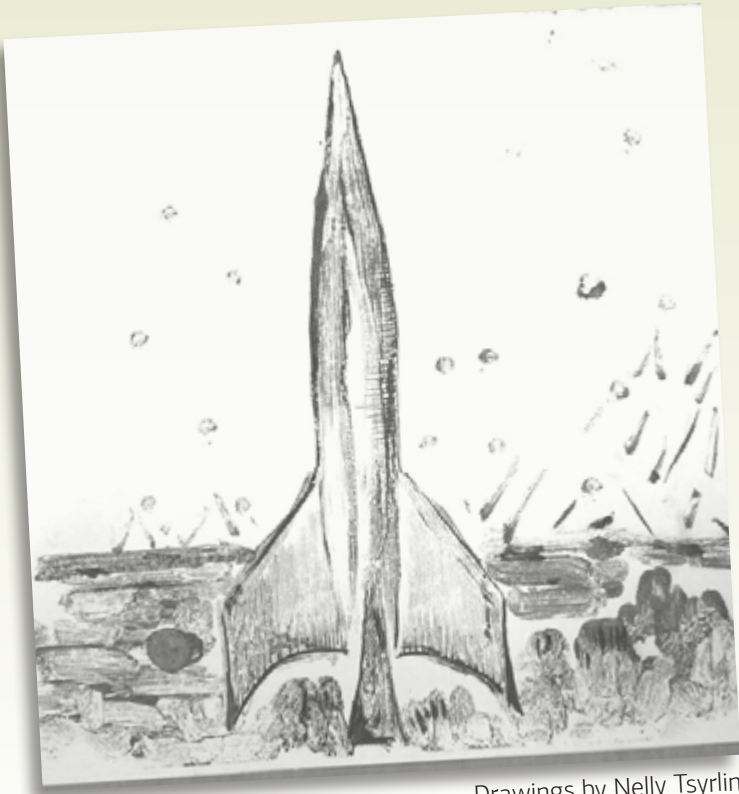
How did you decide how to rank your items? In the first instance, was there consensus for most items? If not, were you able to convince the other team members?



b. NASA EXERCISE: STRANDED ON THE MOON

Scenario: You are a member of a space crew originally scheduled to rendezvous with a mother ship on the lighted surface of the moon. However, due to mechanical difficulties, your ship was forced to land at a spot some 200 miles from the rendezvous point. During reentry and landing, much of the equipment aboard was damaged, and since survival depends on reaching the mother ship, the most critical items available must be chosen for the 200-mile trip. Listed below are the 15 items left intact and undamaged after landing. Your task is to rank them in terms of their importance for your crew in allowing them to reach the rendezvous point. Place the number 1 by the most important item, the number 2 by the second most important, and so on through number 15 for the least important.

- | | |
|--|--|
| <input type="checkbox"/> Food concentrate | <input type="checkbox"/> Stellar map |
| <input type="checkbox"/> 50 feet of nylon rope | <input type="checkbox"/> Self-inflating life raft |
| <input type="checkbox"/> Parachute silk | <input type="checkbox"/> Magnetic compass |
| <input type="checkbox"/> Portable heating unit | <input type="checkbox"/> 20 liters of water |
| <input type="checkbox"/> Two .45 caliber pistols | <input type="checkbox"/> Signal flares |
| <input type="checkbox"/> 10 meters of rope | <input type="checkbox"/> First-aid kit, including injection needle |
| <input type="checkbox"/> One case of dehydrated milk | <input type="checkbox"/> Solar-powered FM receiver-transmitter |
| <input type="checkbox"/> Two 100 lb. tanks of oxygen | |



Drawings by Nelly Tsyrlin

5 WRITING

In their short guide to consensus building, The Massachusetts Institute of Technology (MIT) elaborates upon several terms.

- a.** Research the terms and how they apply to resolving conflicts.

*Consensus Recording Meditation
Assessment Single text procedure
Creating and claiming value Convening
Maximizing joint gains
and circles of stakeholder involvement
Conflict Facilitation*

- b.** Then write a five-paragraph essay about how these terms could be applied to a real-life conflict in either your personal life or in the news.

- c.** Start with a mind map like the kind you used in the “Great Speeches” section of Chapter 1.

6 SPEAKING

SPOKESPERSON

You’re the spokeswoman or spokesman for a major company. They are trying to convince the general public about a contentious issue.

- a.** Choose a contentious issue;
- b.** Convince the general public [your class] that your particular line of argumentation is valid;
- c.** Field questions from the audience. Defend your position;
- d.** Afterwards, reflect. Does the company’s position reflect your personal opinion, and if not, how did it feel arguing for a company?
- e.** Would you do something like this in real life?

PART 9: ZUCKERBERG KILLING FOOD

WHEN YOU BUY THIS



WHEN YOU EAT THIS



DO YOU THINK OF THIS?



**WHAT IS YOUR
RELATIONSHIP
WITH YOUR FOOD?**

1 SPEAKING

Below is a comment from Facebook founder Mark Zuckerberg's private Facebook page. Divide the class into groups of three. Each group should have one person who agrees and one who disagrees with Zuckerberg's position. Prepare to debate in front of the class.



2 LISTENING

ANSWER THE FOLLOWING QUESTIONS:

1. What is Bompas & Parr?
2. What is the first step described in Bompas & Parr's ritual?
3. Could you swap paragraph three with paragraph two? Explain.
4. Is killing the crab humane?
5. Paragraph three says that the culinary area is typically "veiled with mystery." Can the same idiom be applied to the typical home kitchen where you live?
6. Would you like to demystify your way of eating?



LISTENING PASSAGE: RESPECTING THE FOOD SOURCE




1. According to the speaker, why are many children unaware of their food sources?
2. What are the disadvantages of children not being aware of their food source?
3. What solutions does the speaker propose?
4. What are the downsides of the speaker's proposals?
5. How does the speaker differentiate plant- and animal-based food? Do you agree?
6. Is there a difference between how indigenous communities and mainstream society in your country consider their food source?
7. Does this change then indigenous people's move out of their communities and into heterogeneous communities?

PART 10: INVESTIGATIVE ENVIRONMENTAL PROBLEMS

Pollution frequently impacts the food and water sources of indigenous populations. In Canada, for instance, the Grassy Narrows First Nation has suffered from mercury poisoning from a contaminated river that their ancestors have fished from for thousands of years.

In 2017, over 130 Baikal seals washed up dead on the shores of Lake Baikal. The seals are an important part of many indigenous people's lives. Scientists are uncertain whether pollution, fish stock depletion, or something else is the case, and they have been conducting tests to find the answer. How would you go about exploring this problem? Participants at a workshop in Irkutsk, a city close to Baikal, suggested:

1. Visiting the Limnological Institute Siberian Branch of the Russian Academy of Sciences (<http://www.lin.irk.ru/en/>) and the Baikal Museum in Listvyanka. At both locations, investigations and scientific reports can be made.
2. Interview the local indigenous population about the Baikal seal problem, and see whether it is projected to impact their lives and whether they have an idea why so many washed up dead. These interviews and investigations could then be...
3. An online blog or vlog.



Choose an environmental issue in your country. The closer to home the better. It can be something big (e.g., large-scale factory pollution) or a less prominent case (tree mold).

Get into groups and organize a plan for your project. Decide if you will be making visits (*where*), holding interviews (*who*), the topics of discussion (*what*), and the assessment process (*how*).

Check out <http://sacredland.org/map/> for a map of sacred lands that are protected and in danger.